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DEPARTMENT OF ENVIRONMENTAL PROTECTION
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September 27, 2016

Andrew Park, Project Manager
Corrective Action Section
Hazardous Waste Programs Branch
U.S. Environmental Protection Agency Region 2
290 Broadway, 22nd Fl.
New York, New York 10007-1866

RE: Hess Corporation Former Port Reading Refinery Complex
AOC 10 – Truck Loading Rack
750 Cliff Rd
Woodbridge, Middlesex
PI #: 006148
Activity Number: RPC000002

Dear Mr. Park:

The New Jersey Department of Environmental Protection (Department) has completed a review of the Remedial Investigation Workplan dated July 20, 2016, submitted pursuant to the Resource Conservation and Recovery Act (RCRA), Hazardous and Solid Waste Amendments (HSWA) Permit and the NJDEP Technical Requirements for Site Remediation at N.J.A.C. 7:26E (Tech Regs).

The Department's comments on the submittal are provided below.

1. The proposed soils investigation does not address all potential source areas or delineation of potential source areas. Hess Corporation (Hess) proposes seven grid-based samples on the eastern section of AOC 10, and contingent samples further east of the primary locations. The proposed sample locations do not encompass the full AOC depicted on the report's figures. The sampling depths do not address the potential of surface and near-surface discharges.

   The proposed sampling must address prior releases, discharges, and LNAPL discussed in Section 3.0 of the RIWP.

2. Hess must address the impact to groundwater pathway. Soil sample results shall be compared not only to the Department's Direct Contact Soil Standards but also to the Impact to Groundwater Soil Cleanup Criteria. The impact to groundwater pathway shall

be addressed per N.J.A.C 7:26D-1.1(b) and NJDEP's webpage http://www.nj.gov/dep/srp/guidance/rs/

3. Hess proposes installing soil borings "using a hand-auger / air knife equipment and / direct push or auger techniques". Soil sampling for volatile organic compounds shall be performed pursuant to N.J.A.C. 7:26E and the Field Sampling Procedures Manual. Hess's sampling protocol is not acceptable because of the potential for significant loss of volatile organic compounds (VOCs). Air knifing will affect VOC sampling results near or within the air knife interval due to the vigorous mixing and the injection of air. Hand augering likewise is not appropriate for VOC sample collection because of the potential loss of volatile organic compounds. Use of a soil collection device that causes mixing cannot be used for VOC sample collection since the tool will break up the soil structure and aerate the soil causing significant VOC loss.

   Hess's RIWP shall be modified such that sampling methodologies are proposed and conducted in accordance with the Department's regulations.

4. The RIWP shall discuss the potential of vapor intrusion, warranted due to the presence of LNAPL in the AOC.

5. The NJDEP does not accept a delineation work plan that is lacking concurrent actions to define the free and/or residual LNAPL remedial action area within AOC 10.

   Fee and/or residual LNAPL within AOC 10 was first identified in 1993. LNAPL releases continue to generate dissolved contaminants that can migrate to surface water, underground utilities, deeper water bearing zones, off site areas, etc. Hess must develop a remedial action work plan for the free and/or residual LNAPL source areas in the truck loading area concurrent with additional dissolved plume delineation and impact assessments. Further, Hess is reminded that monitored natural attenuation of free and/or residual product source areas is prohibited pursuant to the Technical Requirements for Site Remediation at N.J.A.C. 7:26E-5.1(e).

   It is NJDEP's understanding that Dual Phase Extraction was successfully tested at AOC 10 based on prior conversations with the previous consultant (Dave Carlson, EnviroTrac Ltd). Demolition of the AWWTP after sale of the property to Buckeye means this remedy needs to be redesigned in conjunction with alternative water management plans.

6. Figure 2 AOC 10 Site Map: Section 3 identifies historic spills, temporary well installations, and monitor well installations. Underground utilities are mentioned in the historic spill descriptions. Figure 2 must include the locations of the historic spills, all monitor wells, all temporary wells and all subsurface utilities (storm water, facility DPCC storm water management lines, and petroleum pipelines). Some historic spill locations are in the adjacent TLR AST area, but this area is not included with the limits of AOC 10 as shown on this figure. Historic spills investigations in the TLR AST area also had temporary well installations that must be identified.

7. Figure 4 Ground Water Contour Map: The contour maps, and the computer program that generates them, are not accepted. The figures do not represent any understanding of site conditions and so must be revised.

   The Department notes from the RIW and the quarterly progress reports that the only wells being gauged involve with the site are the LNAPL gauging locations. Earth Systems did not perform site wide gauging as EnviroTrac Ltd. had done with the annual site sampling event. The Department requires site wide gauging with the annual site sampling event.

   Flow conditions represented in 2015 EnviroTrac Ltd. site wide gauging events must be used until site wide gauging at site-wide ground water and surface water gauging locations is re-implemented. Site wide gauging events that include surface water gauging are required.

8. Figure 5 Proposed Soil Boring Locations and Section 4:
   - The soil boring locations will not help delineate or identify the source of the LNAPL identified at the storm water utility line (product identified; described LNAPL migrating beneath the asphalt toward the utility; was the reason for repair of utility, excavation and sump installations) that crosses AOC 10, or help make additional remedial action decisions in this part of AOC 10.
     - o Expand the grid to include this area.
     - o Identify if this release is related to the elevated MTBE concentrations identified in AOC 10.

   - The proposed soil boring location figure must also include:
     - o Historic soil boring and temporary well locations that highlight locations with evidence of LNAPL impacts (odors, staining, free product, residual product, soil sample results, etc.)
     - o Locations of the other historic spills in AOC 10.

9. Figure 6 Proposed Ground Water Monitoring Well Locations: Figures must include the following information:
   - The locations of all underground piping in and around the investigation/remediation area, including but not limited to:
     - o Regional storm water line that passes through the investigation area (with invert depths) all the way to its discharge point;
     - o DPCC storm water lines to the API Separator or other storm water discharge point (with invert depths);
     - o Regional petroleum product transmission lines (with invert depths).

   The locations and construction must be considered in the evaluation of horizontal delineation data and well locations. The absence of this information is a significant omission.

- Proposed TR-7D and 7DD are likely south of subsurface utilities. Construction information for this subsurface piping is needed to the review of water quality data.
- The locations of any subsurface foundations or structures that intersect the water table need to be considered in the evaluation of ground water flow and contaminant migration.
- The locations of all wells, including abandoned wells that are previous iterations of an existing well.
- The locations of temporary wells and soil borings, highlighting those locations that identified petroleum hydrocarbon odors, staining, elevated field screening levels, elevated dissolved data, free phase and/or residual phase LNAPL. If the AST area is part of the AOC 10 RIW, include the historic spill and temporary well locations in those area.
- Ground water contour maps that represent all aquifer intervals being further investigated (shallow, D- and DD-well flow conditions). Since Earth Systems has not been gauging the deeper wells, use the EnviroTrac 2015 data and contour maps.

10. Historic Data: All temporary well data, soil boring logs, temporary well boring logs and screen intervals, need to be provided with the RIW and RAW. Specific to ground water monitor well sampling, include the sample method (volume average, low flow, etc.). If low flow, identify the pump intake depth (TOC) for the sampling event with the data summary for the monitor well. Pump intake depths have varied in shallow and deep wells, and some deep well sampling event pump intake depths were within the well casing, not the well screen interval. Variations in sampling that may qualify some data sets must be part of the historic data summary.

11. Well Construction Summary Table: The well construction summary table must include both current and abandoned wells. Boring logs are required for all wells (current and abandoned) as part of the RIW and RAW.

12. Ground water and surface water interaction: The 2012 AOC 10 RIR showed elevated ground water concentrations at the edge of the detention pond.
    - Ground water discharge to surface water will need to be evaluated. The NJDEP Ground Water to Surface Water Investigation Technical Guidance document provides information on tools that are available to investigate this pathway.
    - Ongoing surface water and ground water gauging is required to understand flow conditions during each sampling event. Interaction can vary (surface water discharging to ground water and vice versa) resulting in varying ground water flow and contaminant migration conditions, and receptor impacts.

13. Additional Items:
    - Hess must identify if the detention basin design used a low permeability base material installed as part of the storm water control/DPCC plan for the site, since the basin was part of storm water equalization.

- Remedial investigation of AOC 10 impacts around and to the regional storm water line must include the utility discharge location, which is the "head of Smith Creek" area.

Thank you for your cooperation in this matter. If you have any questions, call Phil Cole at (609)292-0395, or email at Phil.Cole@dep.nj.gov.

Sincerely,

Philip Cole, Case Manager
Bureau of Case Management